

Claims

1. A multifunctional cable comprising:

electric cords, a image signal cord and one or more control cords to transfer signals of sounds, supersonic waves, temperature information or control orders with individual 5 inner coats; and

exterior of these cords are molded or filled with flexible and durable molding resin or fibers, and the outer surface of the cable is covered with an abrasion resistant coat.

2. The multifunctional cable according to claim 1 characterized that using tin plated

10 copper line as the lines of the electric cords and polyethylene or polypropylene as the inner coat material of the electric cords; silver plated copper line as the inner line and tin plated copper line as the outer line of the image signal cord and control cord and Teflon as the inner coat material of the image signal cord and control cord; Kevlar fibers or carbon resin as the molding resin; and polyethylene or polypropylene as the abrasion-resist exterior coat 15 material.

3. The multifunctional cable according to claim 1, wherein the diameter of the electric cords is different from the diameter of the image signal cord and control cord.

20 4. The multifunctional cable according to claim 3, wherein the diameter of electric cord is 0.306mm, the diameters of image signal cord and control cord are 0.12mm, and the diameter of the whole multifunctional cable is 1.5mm or below.

5. A multifunctional cable comprising:

25 electric cords and a image signal cord with individual inner coats; and exterior of these cords are molded or filled with flexible and durable molding resin or fibers, and the outer surface of the cable is covered with an abrasion resistant coat.

6. The multifunctional cable according to claim 5 characterized that using tin plated copper line as the lines of the electric cords and polyethylene or polypropylene as the inner coat material of the electric cords; silver plated copper line as the inner line and tin plated copper line as the outer line of the image signal cord and Teflon as the inner coat material of the image signal cord; Kevlar fibers or carbon resin as the molding resin; and 5 polyethylene or polypropylene as the abrasion-resist exterior coat material.

7. A fishing equipment with video system comprising:

a multifunctional cable according to claim 1 through claim 6;

10 a photographing part composed of a weight connected to one end of said multifunctional cable, having a built-in camera and one or more control devices selected from supersonic wave sensor, digital temperature sensor, underwater mike, pressure sensor, vibrating motor, geomagnetic sensor and camera angle adjustor and several tying rings for the fishhook are formed; and a buoyancy regulating float connected to a point of said 15 multifunctional cable;

an external device part connected to the other end of said multifunctional cable, and comprised of a display panel which receives and displays various signals including image signals from said photographing part through said multifunctional cable, a controller communicating to the control devices through the multifunctional cable and controls them 20 by exchanging control signals through the multifunctional cable, and an electric power supplier which supplies power to the above photographing part, display panel and controller.

8. A fishing equipment with video system comprising:

25 a photographing part composed of a weight connected to one end of a multifunctional cable according to claim 1 through claim 6, having a built-in camera, one or more control devices selected from supersonic wave sensor, digital temperature sensor,

underwater mike, pressure sensor, vibrating motor, geomagnetic sensor and camera angle adjustor, several tying rings for the fishhook are formed, and a wireless radio sending/receiving float connected to said weight through said multifunctional cable and including a first radio sending/receiving circuit having an electric power supplier inside;

5 and

an external device part comprised of a second radio sending/receiving circuit exchanging signals with the first radio sending/receiving circuit; a display panel connected to the second radio sending/receiving circuit, and receives and displays various signals including image signals received by the second radio sending/receiving circuit from said 10 photographing part; a controller connected to the second radio sending/receiving circuit and controls the control devices by exchanging control signals through the second radio sending/receiving circuit; and an electric power supplier which supplies power to the second radio sending/receiving circuit, display panel and controller.

15 9. A fishing equipment with video system comprising:

a multifunctional cable according to claim 1 through claim 6;

a photographing part comprised of a weight connected to one end of said multifunctional cable, having a built-in camera and one or more control devices selected from supersonic wave sensor, digital temperature sensor, underwater mike, pressure sensor, 20 vibrating motor, geomagnetic sensor and camera angle adjustor, several tying rings for the fishhook are formed; and a buoyancy regulating float connected to a point of said multifunctional cable;

25 a wireless transceiver connected to the other end of said multifunctional cable, having a first radio sending/receiving circuit with an electric power supplier inside and fixable to a point outside the water; and

an external device part comprised of a second radio sending/receiving circuit exchanging signals with the first radio sending/receiving circuit; a display panel connected

to the second radio sending/receiving circuit, and receives and displays various signals including image signals received by the second radio sending/receiving circuit from said photographing part; a controller connected to the second radio sending/receiving circuit, and controls the control devices by exchanging control signals through the second radio sending/receiving circuit, and controls the display panel; and an electric power supplier which supplies power to the second radio sending/receiving circuit, display panel and controller.

10. The fishing equipment with video system according to claim 9, wherein the wireless transceiver is fixed at a point of grip part of the fishing pole.

11. The fishing equipment with video system according to claim 7 through claim 9, further comprising a fishing pole with an inlet hole and an outlet hole at both end parts of the fishing pole respectively, so that the multifunctional cable can pass through the fishing 15 pole.

12. The fishing equipment with video system according to claim 7 through claim 9, further comprising a connector which connects cut ends of the multifunctional cable between said weight of the photographing part and the float, so that the user can change the 20 weight of the photographing part easily.

13. The fishing equipment with video system according to claim 7 through claim 9, wherein the case of said weight of the photographing part is known lure shape, and a built-in camera is built inside the lure

14. The fishing equipment with video system according to claim 7 through claim 9, wherein the case of said weight of the photographing part is bisected case shape, which

has a hinge on one side and a fixing flange on the other side of the bisected case, so that said bisected case can be integrated and disintegrated using fixing bolts.

15. The fishing equipment with video system according to claim 7 through claim 9,
5 wherein the bottom part of said weight is filled with materials of high density, the middle part has a built-in camera and control devices, and the upper part has a void, so that said weight always stand stably under the water.

16. The fishing equipment with video system according to claim 7 through claim 9,
10 further comprising certain length of flexible tube or a thin wire on the weight, so that the user can control the location of the fishhook and shooting angle of the camera.

17. The fishing equipment with video system according to claim 7 through claim 9,
15 wherein the camera angle adjustor is constructed by installing the  shaped fixture driven by a motor in the weight so as to place each end of said fixture at each end of the weight case on the upper part of the weight, so that the camera angle is adjustable to any angle by driving said fixture through controlling the rotating direction of the motor by using the controller of the external device part.

20 18. The fishing equipment with video system according to claims 7 through claim 9, further comprising a underwater float at a point of the multifunctional cable connecting the weight and the buoyancy regulating float or the wireless radio sending/receiving float, and one or more supplementing weight hung to the ring attached to the bottom of the weight case, so as to prevent the weight from fluctuating under the water and help to 25 regulate the density of the weight.

19. The fishing equipment with video system according to claim 7 through claim 9, wherein the display panel, controller and electric power supplier of the external device part is constructed by adding a connector to connect with the end of the multifunctional cable or installing a radio sending/receiving circuit which exchange signals such as image signal with the wireless radio sending/receiving float of the photographing part or the wireless transceiver inside, to a known mobile phone with power supply unit, display unit, input unit, image storage unit and control unit.

20. An underwater image video system comprising:

10 a multifunctional cable according to Claims 1 through 6;
a photographing part comprised of a photographing device connected to one end of the multifunctional cable, having a built-in camera and one or more control device selected from supersonic wave sensor, digital temperature sensor, underwater mike, pressure sensor, geomagnetic sensor and camera angle adjustor inside; a diver's location indicating buoy connected to a point of said multifunctional cable; and a winding reel used to control the length of the multifunctional cable between the buoy and the photographing device according to the distance between the water surface and the diver;
an external device part connected to the other end of the above multifunctional cable and comprised of a display panel which receives and displays various signals including image signals from the photographing part through the multifunctional cable, a controller communicating with the control devices through the multifunctional cable and controls the control devices by exchanging control signals through the multifunctional cable, and an electric power supplier which supplies power to the above photographing part, display panel and controller.

21. An underwater image video system comprising:

a photographing part comprised of a photographing device connected to one end of the multifunctional cable according to Claims 1 through 6, having a built-in camera and one or more control devices selected from supersonic wave sensor, digital temperature sensor, underwater mike, pressure sensor, geomagnetic sensor and camera angle adjustor 5 inside, a diver's location indicating buoy connected to the other end of the above multifunctional cable, having a first radio sending/receiving circuit inside, and a winding reel used to control the length of the multifunctional cable between the buoy and the photographing device according to the distance between the water surface and the diver;

10 an external device comprised of a second radio sending/receiving circuit exchanging signals with the first radio sending/receiving circuit; a display panel connected to the second radio sending/receiving circuit and receives and displays various signals including image signals received by the second radio sending/receiving circuit from the photographing part; a controller connected to the second radio sending/receiving circuit and controls the control devices by exchanging control signals through the second radio 15 sending/receiving; and an electric power supplier which supplies power to the second radio sending/receiving circuit, display panel and controller.

22. The underwater image video system according to claim 20 or claim 21, further comprising a twin lens reflex on the exterior case of said photographing device, composed 20 of a case of each end open and with at least one or more curves, a hinge installed on the curved part of the above case, and a reflector installed on the curved part to reflect the incident ray to a set degree.

23. An underwater image video system according to claim 20 or claim 21, 25 wherein the camera angle adjustor is constructed by installing the  shaped fixtures driven by a motor in the photographing device so as to place each end of the fixture at each end of the photographing device case on the upper part of the photographing device, so that

the camera angle is adjustable to any angle by driving said fixture through controlling the rotating direction of the motor by using the controller of the external device part.

24. The underwater image video system according to claim 20 or claim 21,
5 wherein the display panel, controller and electric power supplier of the external device part
is constructed by adding a connector to connect with the end of the multifunctional cable
or installing a radio sending/receiving circuit which exchange signals such as image signal
with the wireless radio sending/receiving circuit built in the buoy of the photographing part,
to a known mobile phone with power supply unit, display unit, input unit, image storage
10 unit and control unit.